

STS-104 POST LAUNCH PAD DEBRIS INSPECTION REPORT
KSC Debris Team
12 July 2001

The post launch inspection of the MLP-2, Pad B FSS and RSS was conducted on 12 July 2001 from Launch + 1 to 4 hours(0600 to 0900 EDT). No flight hardware was found.

Orbiter liftoff lateral acceleration data to predict stud hang-ups received from Boeing-Huntington Beach indicated that no SRB holddown stud hang-up had occurred, the reported value was 0.095. Evaluation of the MLP 0-level was performed and the south holddown studs were visually assessed as having no indication of hang-up. Erosion was typical for the north posts with some evidence of missing RTV at the HDP haunch interface. North holddown post blast covers and T-0 umbilical exhibited minimal exhaust plume damage. Both SRB aft skirt GN2 purge lines were intact, with no protective tape layering evident.

The LO2 and LH2 Tail Service Masts (TSM) appeared undamaged and the bonnets were observed to have closed properly. The MLP deck was in generally good shape, no damage noted and minimal debris evident.

The GH2 vent line latched in the fourth of eight teeth of the latching mechanism and was off-center towards the north. The GUCP 7-inch QD sealing surface exhibited no damage. A 4-inch section of the peripheral seal was missing from the aft (bottom) location. The deceleration cable was in nominal configuration, with the vent line blanket was sooted and in generally good condition.

The OAA appeared to be intact with no evidence of plume impingement.

All slidewire baskets were secured with no evidence of damage.

The GOX vent arm, hood, ducts and structure appeared to be in good shape with no indications of plume damage. The vent seals were inspected and appeared to be in good condition with no damage evident.

Debris findings included:

- East elevator doors were damaged at the base (pushed in and off-track) at the 175, 235, and 255 foot levels.
- No flight debris was found on the Pad apron or adjacent grass.
- No unusual debris items were found on the FSS.
- On the west side SRB flame trench (north) deflector a piece (approx. 2'x6"x6") of material was missing. Damage to metal grating 100 yards from flame deflector was noted and appeared to be inline with the missing material area.
- On the east side SRB flame trench floor, near (north) deflector, a piece (approx. 3'x3'x2") was material was missing with metal banding reinforcement protruding from resultant hole.
- Control panel signs were noted on deck grating adjacent to corresponding panel mount locations, one at FSS 175 and other at 215 foot levels.
- Rubber grommets were noted on deck grating at 175 and 255 foot levels.

Overall, damage to the pad appeared to be minimal. Minimal debris was noted on pad apron and FSS.

Robert Speece	NASA-KSC
Doug Powell	LMMSS
Ray Brewer	USA
Bill Atkinson	Boeing